U.S. Department of the Interior
Bureau of Land Management

New Fork River Habitat Restoration and Boat Access Environmental Assessment

DOI-BLM-WY-D010-2018-0087-EA

Pinedale Field Office, High Desert District, Wyoming

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1. Introduction

The New Fork River is of statewide importance as a popular fishery in western Wyoming. It is managed by the Wyoming Game and Fish Department (WGFD) primarily as a wild brown trout fishery. The New Fork River is one of the most popular fisheries in the Pinedale region. The river landscape is of great importance to consumptive and non-consumptive recreationists, a multitude of terrestrial and aquatic wildlife species, and to agricultural water users. The New Fork River corridor is also known for its valuable natural gas deposits and development.

Over time, the channel of the New Fork River has experienced accelerated erosion, impacts to stream channel function, loss or reduction in important vegetation types, and declining fish habitat quality. In addition, recreational access to the channel has been reduced by eroding banks.

The BLM, in cooperation with the WGFD, is proposing a two phase project that would improve watershed and water quality on approximately two miles of the New Fork River. Beginning in late summer of 2019 Phase I would enhance instream and riparian habitat conditions for aquatic and terrestrial wildlife for about 0.75 miles upstream, and improve facilities for recreationists. Phase II would begin implementation in the late summer of 2020 and would continue the habitat enhancements through the remaining 1.25 miles of river upstream of the boat ramp facilities as funding is made available.

The proposed project site is located off County Road 23-106, approximately 20 miles from Pinedale, WY and approximately 10 miles south from Boulder, Wyoming, Sixth Principal Meridian, T. 31 N., R. 109 W., sec. 11, 12; and T. 31 N., R. 108 W., sec. 7.

Purpose and Need

The purpose for the project is to correct accelerated erosion and impacts to stream channel function, improve habitat for fish, and to restore and improve access to the New Fork River for recreationists. The need for the analysis is to respond to the proposal by WGFD to implement the project.

Decision to be Made

After thorough analysis, the BLM authorized officer would decide whether to approve the proposed project, and what conditions, if any, would be applied.

Scoping and Issues

Scoping for the New Fork restoration and boat access project began on 15 March 2016. Scoping focused on those who expressed interest or would be directly affected by the proposed project. WYGF, Trout Unlimited, Wyoming State Historic Preservation Office, adjacent landowner(s)

and the Jonah Interagency Office were contacted directly. Public outreach was accomplished through the media.

Issues identified, and where they are addressed in this (EA), include:

- How would the proposed project impact air quality and greenhouse gas emissions in Sublette County, Wyoming?
  Addressed in Appendix A.
- How would the proposed project impact upland vegetation, wetlands, and riparian conditions in the project area?
  Addressed in section 3.1
- How would the proposed project cause displacement of livestock or disruption of livestock management?
  Addressed in section 3.2
- Would the proposed project improve recreational activities in the area?
  Addressed in section 3.3
- How would the proposed project affect erosion?
  Addressed in section 3.5
- Would the proposed project cause displacement of terrestrial and aquatic wildlife?
  Addressed in sections 3.6 and 3.7
- How would the proposed project affect sedimentation and water quality in the New Fork River watershed?
  Addressed in section 3.7 and Appendix A
- How would the proposed surface disturbance affect cultural resources in the project area?
  Addressed in section 4 and Appendix A

Resources not present, or not affected by proposed project are documented in Appendix A.

2. Proposed Action and Alternatives

2.1 Proposed Action

The project is located within the WYGF Strategic Habitat Plan (SHP) Green-New Fork River Corridor Crucial and Enhancement Area. The SHP goal is to enhance, improve and manage priority wildlife habitats that have been degraded. The project is intended to increase river-based recreation through habitat enhancements that maintain or increase productivity of fisheries, increase public awareness of habitat issues and the critical connection between healthy habitat and fisheries populations, promote collaborative habitat management efforts with the general public, conservation partners, private landowners and land management agencies.

The BLM, in cooperation with WGFD, proposes to implement the following actions for habitat restoration and recreational improvements on BLM Land adjacent to the New Fork River (Figure

1). The proposed project consists of a two phase implementation strategy over a multi-year period outlined in Appendices B and C:

Phase I- Would occur Summer/Fall 2020 and would address the lateral migration of the river channel into the parking area at the old access point-construct the boat launch, construct fencing along the BLM boundary within the project area and complete habitat restoration on the adjacent lower 0.75 mile of the project area (Appendix B).

Phase 1 would consist of eight components:

1. A boat ramp, turnaround, toilet, and parking area would be constructed near the existing parking area and boat ramp to provide boat access for river recreationalists. 2,993 cubic yards (CY) of soil would be moved to level parking area. To construct the boat ramp 146 CY of material would be brought to the project site.
2. A swell adjacent to boat ramp would be stabilized by using a series of check dams to correct some accelerated erosion and reduce sediment delivery into the New Fork River.
3. Willow (*Salix ssp.*) would be planted to provide bank stability and improve habitat on approximately 1,500 feet of river.
4. Eighteen rock flow control devices called J-hooks would be installed on the east side of the river to direct current away from the bank and to protect the river bank from erosion.
5. A point bar on the west side of the New Fork River would be expanded to narrow the channel width and increase the water velocity to promote the transport of sediment.
6. Logs with roots attached would be installed called toe wood on the outside bends of the river and adjacent to the boat ramp in order to protect the bank from erosion and protect the boat ramp from scouring.
7. The river bank would be re-sloped on the west side of the river downstream from the boat ramp to improve connectivity of the floodplain.
8. Wood top rail fence would be constructed along the BLM-private boundary adjacent to an unallocated parcel totaling 5,100 feet to assist in managing the parcel for wildlife habitat. Existing obsolete fence within a BLM unallocated parcel would be removed.

Phase II- Would occur in subsequent years (2020 or later) and as funding allows. Habitat restoration would continue on the remaining 1.25 miles upstream of Phase I. The same restoration techniques and treatment types would be used to stabilize banks and narrow the stream channel (Appendix C).

The full restoration plan with prescribed treatments, treatment locations, material volumes and quantified disturbance areas can be found in Appendices B through E.

The majority of the work would be completed with heavy machinery. Heavy machinery would operate within a corridor identified in the river to minimize impacts. Large amounts of rock, dead wood, and live willow plants would be brought to the project site.

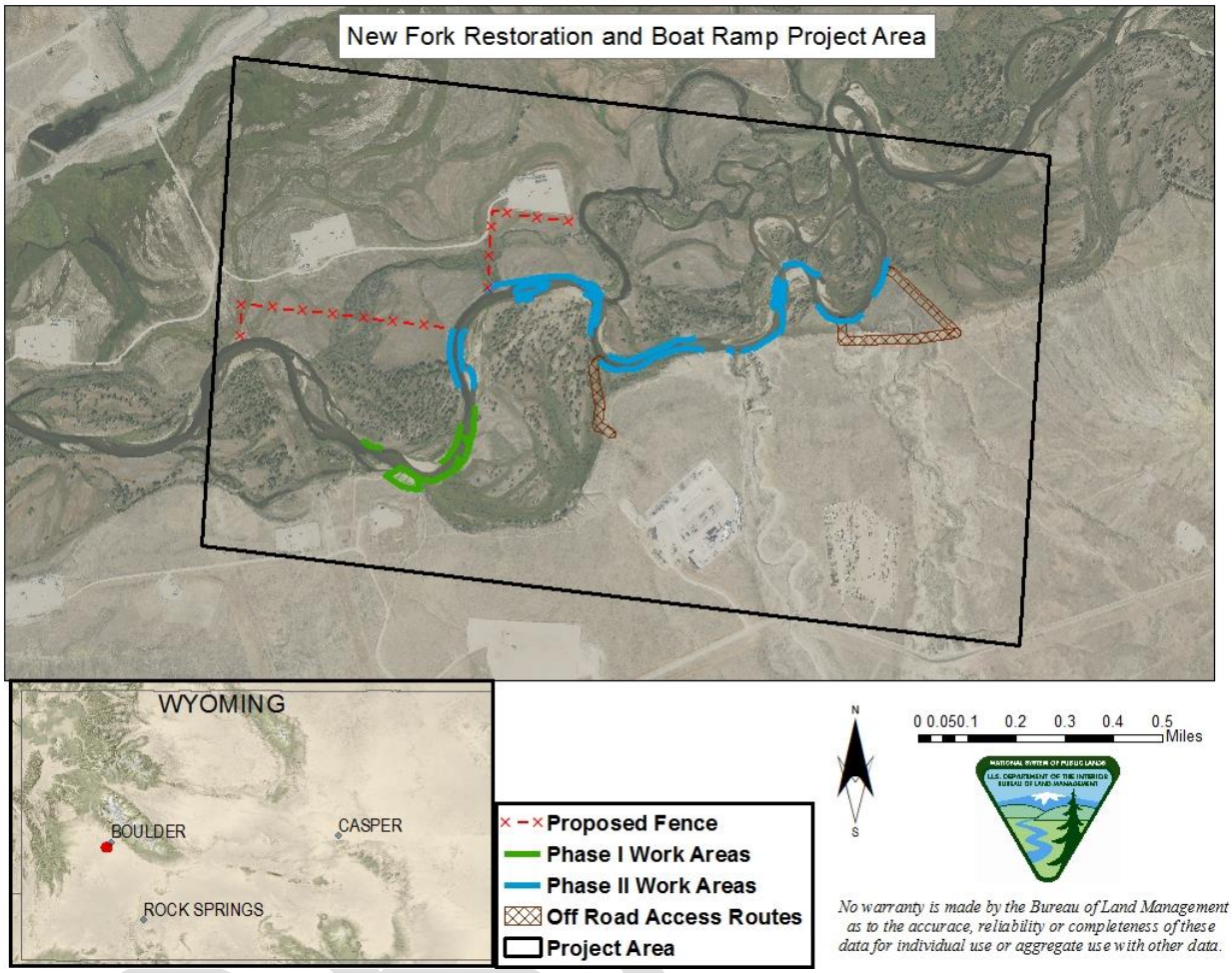

Figure 1. New Fork Restoration and Boat Ramp project area map

Appendices B through E in provide a very detailed description of the Proposed Action complete with engineering diagrams for each type of treatment.

2.2 No Action Alternative

Under the No Action alternative, the project would not be implemented. No bank stabilization, boat ramp construction, vegetation planting, fencing, or other work would be conducted.

Conformance

The Proposed Action is in conformance with the following Land Use Plan(s)

USDI 2008. Record of Decision and Approved Pinedale Resource Management Plan, Pinedale Field Office, Pinedale Wyoming, as amended. (PRMP)

Specifically: 2.3.8 Recreation and Visitor Services Management and 2.3.13 Watershed and Water Quality (Surface Water and Groundwater) Management.

USDI 2015. Record of Decision and Approved Resource Management Plan Amendments for the Rocky Mountain Region including the Greater Sage-Grouse Sub-Regions of: Lewiston, North Dakota, Northwest Colorado and Wyoming and the Approved Resource Management Plans for Billings, Buffalo, Cody, HiLine, Miles City, Pompeys Pillar National Monument, South Dakota and Worland, as amended. (ARMPA)

USDI 2019. Wyoming Greater Sage-Grouse Approved Resource Management Plan Amendment and Record of Decision. (ARMPA, as amended)

Applicable statutes, regulations and applicable plans referenced in the PRMP.

3. Affected Environment and Environmental Effects

3.1 Vegetation, Wetlands and Riparian Areas

Affected Environment

The project area is primarily located within the Subirrigated (Sb) 15-19" Precipitation Zone, Foothills and Mountains West ecological site. The Historic Climax Plant Community (HCPC) in this ecological site is Tufted Hairgrass/Willow Plant Community. Potential vegetation for this site is estimated at 70% grasses or grass-like plants, 15% forbs and 15% woody plants. Although not represented on the ecological site description, narrowleaf cottonwood (*Populus angustifolia*) is a dominant species in the project area. The project area has poor age diversification from less than expected recruitment of young cottonwood individuals or shoots. Typically, this is a result of herbivory from livestock and/or wildlife.

Environmental Effects

No Action
Vegetation would likely stay the same. Without improved control of livestock in the unallocated grazing unit, lack of cottonwood regeneration could result in reduced cottonwood vegetation production and cover over the long term. A reduction in cottonwood cover and production could further adjust plant composition and production, and contribute to continued streambank shearing.

Proposed Action
Vegetation cover and production would increase in seeded and planted areas. Willow plantings on the streambank would increase the amount of woody plants in the project area. A reduction in lateral movement of the New Fork River would allow for natural colonization of bare streambank areas. Narrowing of the stream channel would raise the elevation of the water table in the project area and downstream, potentially changing riparian vegetation production and

composition. Construction of the fences would include removing willow and other woody species along the fence route. Exclusion of livestock from the unallocated parcels and exclusion areas within the project area would allow for greater recruitment of young woody species. Heavy equipment usage in the Proposed Action would trample plants and compact soils resulting in temporary bare areas and reduced plant production. Plant production would recover quickly, supplemented by plantings and protected by new fencing. Bare ground created by this disturbance could allow colonization areas for weed species if seeds are present. Mitigation measures described in detail (Appendix E p. 18) would minimize weed establishment. Overall effects to vegetation and riparian areas would be positive.

Cumulative Effects and Reasonably Foreseeable Future Actions
The cumulative impact analysis area (CIAA) area is the project area outlined in Figure 1. Disturbance from construction of stream rehabilitation elements would accumulate areas of disturbance with other activities in adjacent private and publicly managed land. Disturbed areas in the project area should recover faster than adjacent disturbed areas due to greater available water and more productive soils. Reseeding and mulching disturbed areas would hasten recovery. Cumulative impacts from the No Action alternative would be the continued grazing of unauthorized livestock within the unallocated areas of the project, and no plantings of willows.

3.2 Livestock Grazing

Affected Environment

The project area is partially located within the New Fork Individual (12113) grazing allotment and partially located in two unallocated parcels of BLM-administered public land. The New Fork Individual allotment contains 2951 acres, has a stocking rate of 9.7 acres per Animal Unit Month (AUM), and a season of use of May 10 to June 20. The allotment is divided longitudinally into 2 pastures allowing for livestock management. The unallocated parcels total 72.3 acres. Existing fences to control livestock are in disrepair and are not located on the property boundary to adjacent private land. Additionally, the New Fork River does not have the flow rate to restrict livestock from crossing or traveling the stream corridor. As a result, livestock use on the unallocated parcel has only been minimally restricted in the past. Livestock use history on the unallocated parcel is sporadic and a result of fencing failures or temporary unrestricted travel. It is likely that livestock have been present in the project area since human settlement of Sublette County.

Environmental Effects

No action Alternative
Livestock use would likely continue on the unallocated parcels and the New Fork Individual allotment as they have in the recent past. Without fence improvements, livestock use would likely continue to be sporadic and have impacts on riparian vegetation and streambank integrity.

Proposed Action

Livestock access would be restricted from the unallocated parcels and temporarily restricted from smaller areas of the streambank where plantings and earthen construction could be damaged by livestock hoof action or livestock herbivory. The restriction of livestock from permitted areas would temporarily reduce the available forage for livestock and temporarily restrict access to the New Fork River by livestock for watering.

Cumulative Effects

The CIAA for livestock grazing is the New Fork Individual allotment and adjacent unallocated parcels. Disturbance in the allotment for other activities such as oil and gas development has excluded livestock from reclamation areas and industrial sites, reducing the available forage. Exclusion for habitat restoration and disturbance related to the proposed project would accumulate more acres and forage that are either unavailable or diminished for livestock consumption. The No Action alternative would have no cumulative effects on authorized livestock grazing other than the potential for continued impacts to the streambank and vegetation.

3.3 Recreation and Visitor Services

Affected Environment

This New Fork River site provides access for visitors seeking water based recreation activities. The lands within the project area are located within the Green and New Fork Rivers Special Recreation Management Area. A goal of Recreation and Visitor Services Management as defined in the Pinedale Resource Management Plan (November 2008) is: "Manage each zone to provide opportunities for the public to achieve targeted, high-quality recreation activities and experiences that produce significant benefits to the visiting public."

Site Description

The boat ramp site is locally known as the Gas Wells river access. Vehicle access is via County Road 23-106 (Boulder South Road) and a short segment of gravel road (0.8 miles). It is unknown when the site was first constructed, however it has been in use for many decades. Typical watercraft used for boating this reach of the river are 10 to 16 foot non-motorized drift boats. These watercraft are generally trailered and should be launched from a developed boat ramp. Canoes, kayaks and rafts are also popular watercraft. The river's shallow water depth and numerous meanders generally prevent the use of large water craft and powerboats. The river is accessible year-round, but most frequently visited during the summer. The river is commonly frozen over for several months in the winter. Narrow road widths at the boat ramp site prevent two way traffic. Industrial contractors and Sublette County Road and Bridge infrequently utilize the site to fill water haul trucks. At times, this activity inhibits recreational access.

As configured, the site is difficult to utilize. The road and or parking area is often muddy during high water and following rain events. The small parking space can accommodate one or two vehicles with trailers. Over the past three to five years this site has become unusable as a launch

or take out location due to the increasing height of the eroded riverbank. Currently, the bank height is approximately four to six feet, making it inaccessible for boat trailers.

This site is not registered within BLM's Facility Asset Management System; therefore, regular monitoring and maintenance does not occur.

River Use and Visitation

This river access serves as a take-out for float trips originating upstream at the BLM managed New Fork-East Fork Confluence River Access (5 mile float) or from further upstream in Boulder, Wyoming (7.9 miles). The access also serves as a put-in for floating downstream to either the Ron Remmick access located on the west side of the river (4.75 miles) or further downstream at the BLM managed, New Fork River Campground (8 miles). In addition to the mentioned boat access sites, the Sublette County Historical Park located immediately upstream from the New Fork River Campground encourages boaters to land their watercraft and visit the park.

The river setting for recreational float trips and other river activities is very good. Boaters can enjoy quality scenery, comprised of sandy bluffs and riverine vegetation. Water flows are sufficient to support boating through the summer. Visitors are attracted by the opportunity to fish, float, observe wildlife, and camp. The majority of lands within the river corridor are private and require landowner permission for access. Public lands within the project area provide a convenient place for boaters to stop and recreate. The vegetation and topography screens from view the industrial and agricultural features present on lands outside the project area.

Boating frequency varies with the seasonal water fluctuations. The best fishing conditions occur after the peak river flows of late spring and early summer. As high water flows decrease, fishing conditions improve. The peak river floating season is June through mid-July. By mid-summer float fishing decreases as water temperatures increase and water depths become low. Recreation activities shift to hunting big game, waterfowl and upland birds during the late summer and early fall.

Visitor Use Estimate and Trends

Based upon communications with recreationists and agency personnel, site visitation has decreased as conditions have deteriorated. Actual visitor use data for the site are not available. Client data from commercial outfitters and information provided by the Wyoming Game and Fish Department, indicate boating has increased in the upper Green River Basin. The popularity of float fishing can be attributed to population growth and regional marketing of outdoor recreation.

Environmental Effects

No Action Alternative

There would be indirect effects if this alternative is selected. Features designed to stabilize and accommodate appropriate public access would not be implemented. The construction of a boat ramp, vehicle parking, travel lanes, restroom and riparian improvements would not occur.

The decline of site conditions would discourage public access. The risks associated with launching a boat from a steep river bank would likely increase. The loss of parking space would inconvenience visitors. Installation of an informational sign that would be helpful for visitor use and enjoyment of public lands would not occur. Water truck operations in a constricted use area would continue to impede recreational activities.

Proposed Action

Direct and indirect impacts would occur if this action is selected. Long term personal benefits would result from the public's use of the river access. An appropriate boat access and adequate parking would enhance public safety. Improved access would enhance opportunities for the public to enjoy river related recreation activities. The riparian habitat enhancements would increase the personal benefits associated with fishing. The addition of a restroom and visitor information would enhance the visitor's comfort and enjoyment of public lands.

This action may create a slight increase in public visitation at the project site. The renovation of the boat launch and parking area would likely spread out visitors in different sections of the river for float fishing. This would likely result in other launch locations along the New Fork River being used less, dispersing visitors evenly between the Boulder and New Fork River Campground launch locations.

The BLM and project partners would incur long term costs associated with facility maintenance and repair.

Short term direct impacts would occur from the construction of the river access and instream riparian developments. The river access site would be temporarily closed during construction to protect public safety. Prior to project construction, the public would be notified about potential inconveniences or safety concerns. Instream riparian habitat construction activities would create short term disruptions to visitors and boaters.

The riparian vegetation enhancements would generate indirect long term positive effects to the recreation setting.

Cumulative Effects

The cumulative impact area (CIAA) for recreation resources is defined as the New Fork River floodplain located between the Boulder access and downstream to the New Fork River Campground and river access at Wyoming Highway 351.

The cumulative effects to recreation from this action in combination with recent past actions indicate a positive change for area visitors and natural resources. Recent recreation related actions include the New Fork River Confluence Boat access renovation, creation of the Ron

Remmick Boat Access, establishment of the Sublette County Historical Park and the potential renovation of the New Fork River Campground. Such actions have improved public access, reduced erosion, and enhanced the public's knowledge about the area's natural and historic resources. The effects of these actions tend to offset adverse impacts to recreation resources and visitors generated by industrial activities.

Adverse cumulative impacts to recreation resources and visitors are not expected from this or other past, present or reasonably foreseeable actions.

3.4 Visual Resource Management

Affected Environment

The Visual Resource Management Objective for this area of the Pinedale Field Office is VRM Class II (PRMP p. 2-4). The objective of this class is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the landscape.

The scenic quality of the river corridor within the project area is high. The river corridor appears natural with few human created intrusions. The riverine landscape of water, vegetation and topography depicts a variety of color, texture and form. Other than short segments of livestock fencing and a small shoreline protection feature, there are few human created features in the project area.

The river access is situated on a terrace four to six feet above the mid-summer water levels. The existing area of disturbance (0.2 acres) attracts the attention of boaters. The site and nearby area (background) are substantially modified. The features are the parking area, river cut bank, access road, livestock fences and to a lesser degree, fluid mineral production structures. The soil color is tan to light brown. Vegetation varies in color from pale green to silver grey. Shoreline vegetation is sparse and green to brown in color.

The river floodplain is dominated by riparian vegetation, willows, grasses and cottonwood trees. Soil colors vary from light tan for the upland river terraces and river sand bars to dark brown where floodplain soils are rich with organic materials. The soil colors moderately contrast with the various shades of green vegetation. As vegetation loses moisture during late summer, the green color of grasses and shrubs tends to blend with the colored soils.

The vegetation of uplands, bordering the river corridor, is primarily sagebrush and grasses. The topography is flat to gently rolling. Portions of this viewshed are dominated by features associated with fluid mineral development. The scenic quality is low within these areas. Roads, pipelines, well pads and production equipment are discordant in line, form, color and texture with the characteristic landscape. The fluid mineral features on both public and private land and

few agricultural features on private lands are largely screened from view by topography and vegetation.

Environmental Effects

No Action Alternative
There would be no change to the existing visual setting and therefore no impacts.

Proposed Action
This project would create direct, short and long term visual impacts. The new permanent disturbance at the river boat access site would be slightly larger (0.4 additional acres) than the existing disturbance (approximately 0.2 acres). Rebuilding the boat ramp and parking area would generate long term visual impacts. In the short term, the disturbance and constructed features such as the staging area would create moderate to strong contrast with the visual setting in line, form, color and texture. The contrast would attract the attention of the casual observer. Standard BLM visual resource protection practices are incorporated into the design to reduce contrasts. These practices include the use of construction materials and colors appropriate for the setting. All surface disturbing activities other than the boat ramp and parking area would be recontoured and vegetated. The steep shoreline would be sloped to allow for access and the establishment of vegetation. This would enhance the visual setting. The restroom would introduce vertical lines and form to the landscape. The restroom would be placed below the horizon to avoid skylining. Restroom coloration would be selected to best match the characteristic landscape.

The aquatic habitat and shoreline stabilization features would create direct short term and long term visual impacts. The change in line form and color would vary depending upon the type of treatment within the riparian area. With the propagation of grasses and woody vegetation, the contrast in line, form, and color would diminish. The introduction of small boulders as J-hook features could appear out of place for several years. This feature would eventually blend in as river sands, debris and vegetation are established. Over time, these treatments would not attract the attention of the casual observer. These shoreline stabilization features would, in the long term, enhance the visual quality.

The visual impacts created by the riparian vegetation fence exclosures would be short term. These fences may attract the attention of the casual observer. When vegetation reestablishment goals are met, the fences would be removed (estimated to be 5 years). The livestock fence in some locations would be visible to boaters; however, vegetation and topography would substantially screen the fence from view. Some non-functional fences would be removed from public lands.

Implementation of the Proposed Action would, in the long term reduce, contrast between soils and vegetation. Visual quality overall would be enhanced. The project as planned would comply with the areas VRM Class II management objective.

Cumulative Effects

The cumulative impact area (CIAA) for visual resources is the New Fork River floodplain located between the New Fork Confluence Access and downstream to the New Fork River Campground and river access at Wyoming Highway 351.

The effects to visual resources from this action and in combination with past federal and partner agency actions have been positive. A likely foreseeable federal action may be the redevelopment of the New Fork River Campground and river access. Other riparian enhancement and irrigation projects have occurred within the CIAA. The level of contrast created by these actions are small and generally complimentary to the landscapes visual values.

3.5 Soils

Affected Environment

The United States Department of Agriculture-Natural Resource Conservation Service (USDA-NRCS) provided a Sublette County 3rd Order soil map and Soil Web Survey (https://websoilsurvey.nrcs.usda.gov/app/HomePage.htm) (soil data explorer) (NRCS 2015a) that includes soil map units 1100, 1101, 1105, 2107, 2112, 2205, 2213, 2214, 5402, 5405, 9207 and 9308 (delineated polygons based on soil biological, chemical and physical properties). These soils exhibit the following characteristics: moderate to severe rutting potential, low (soil map unit 1101) to moderate restoration potential, low to moderate resistance to compaction, slight off-trail and off-road erosion and slight to moderate road and trail erosion. Slopes in the project area are between 0 and 25 percent. Bank erosion within the 2 river miles is 3,195 tons/yr. as indicated in the attached appendices.

Environmental Effects

No Action Alternative
Soil impacts from erosion and sediment loading would most likely continue at current rates. The No Action Alternative would allow past and present activities to continue within the proposed project area, resulting in continued loss of soils due to streambank erosion.

Proposed Action
Construction would impact soil by temporarily disturbing 1,500 feet (about 3.5 acres based on 300 feet buffer width) along the river. Construction would occur during low-flow period and non-saturated soil conditions; thus, only minor soil impacts from erosion, rutting and compaction are anticipated.

Cumulative Effects

The CIAA for soils is the proposed project area. Cumulative effects of exact amounts of future soil loss are unknown. If conditions worsen, soil loss could increase. Long-term soil erosion and sediment loading should be reduced from stream bank improvements if the Proposed Action is selected.

3.6 Wildlife and Special Status Species

Affected Environment

Several big game habitats as designated by the Wyoming Game and Fish Department are present in the project area, including: crucial winter range for pronghorn, crucial winter year long range for moose, and winter range for mule deer. The project area also includes habitats utilized by a variety of raptors and migratory birds, small mammals, amphibians and potentially, reptiles.

There are no threatened, endangered or candidate species present within the project area that were identified as potentially occurring by the United States Fish and Wildlife Service (USFWS 2018), due to lack of suitable habitat. Species designated as BLM sensitive (BLM 2016) that could have suitable habitat within the project area include: trumpeter swan, bald eagle, long-billed curlew, loggerhead shrike, white-faced ibis, boreal toad, northern leopard frog, and Columbia spotted frog. Due to the lack of species observations and lack of suitable habitat availability, other species on the BLM sensitive species list are not likely to be present within the project area (Orabona, Rudd, Grenier, Walker, Patla, & Oakleaf, 2012).

Greater Sage-Grouse (GRSG)
The proposed project is located within general habitat management area (GHMA) for Greater Sage-Grouse (BLM 2015) and is approximately 2-miles from the nearest occupied GRSG lek. The portion of the project area within and immediately adjacent to the New Fork River channel does not provide suitable habitat for GRSG due to lack of sagebrush cover and presence of willows. Open areas of riparian habitat within the floodplain of the New Fork River that are seasonally wet may provide late brood rearing habitat for GRSG. Seasonal habitats for GRSG adjacent to the project area include breeding and summer/late brood-rearing habitats.

Environmental Effects

No Action Alternative
Under the no action alternative, the proposed project would not occur, therefore, there would be no change from current conditions. None of the effects to wildlife species discussed in the following sections would occur.

Proposed Action
Impacts to big game, raptors, migratory birds, small mammals, amphibians and reptiles could be caused directly or indirectly by project activities such as crushing or removal of existing vegetation and disturbance or displacement due to noise and human activity associated with project construction. Adherence to seasonal timing restrictions would decrease potential impacts to big game on crucial winter range, to raptors and migratory birds during sensitive periods including breeding and nesting, and to small mammals, amphibians and reptile species during sensitive periods, but would not eliminate impacts entirely.

Due to the lack of species observations, lack of suitable habitat availability, and no water depletions, the Proposed Action would have "no effect" on federally listed wildlife species or their habitats. All Proposed Actions would comply with the BLM Special Status Species Management protocol. Impacts to sensitive species could be caused directly or indirectly by project activities such as crushing or removal of existing vegetation and disturbance or displacement due to noise and human activity associated with project construction. Adherence to seasonal timing restrictions would decrease potential impacts to BLM sensitive species during sensitive periods. Activities related to this project would not contribute to the listing of any BLM sensitive species as either threatened or endangered as defined by the Endangered Species Act.

Greater Sage-Grouse
Impacts to Greater Sage-Grouse could be caused directly or indirectly by project activities such as crushing or removal of existing vegetation and disturbance or displacement due to noise and human activity associated with project construction. Adherence to seasonal timing restrictions would decrease potential impacts to Greater Sage-Grouse during the breeding, nesting and late brood-rearing seasons (March 15 – June 30).

Cumulative Effects
The area considered for cumulative effects can vary greatly by species and their distribution. The cumulative effects area for this EA was defined by Greater Sage-Grouse. This species was selected due to its landscape scale use of multiple seasonal habitats across the region at different spatial and temporal scales. The Greater Sage-Grouse cumulative impact area was developed by creating a four-mile buffer from the perimeter of the project. Seasonal habitats in the cumulative effect analysis area include sagebrush desert, riparian, and timbered habitats with a mixture of public and private lands.

Livestock Grazing - Maintenance of range improvement projects and livestock grazing has been an ongoing action within the region for many years and would likely continue. Maintenance activities could result in the temporary displacement of wildlife species due to the presence and noise associated with vehicles and tools.

Oil and Gas Development – There are several natural gas wells and associated infrastructure within the analysis area. Impacts to wildlife from oil and gas development and associated infrastructure and human activity include avoidance, displacement and disruption of movement, injury and mortality.

Recreation - Recreational activities could result in temporary disruption to, and avoidance of, habitat by wildlife populations. Unauthorized off-road use may also lead to habitat degradation. Unauthorized use is infrequent and any disruptive footprint would be limited to a small size.

Roads and Transportation - There are several state, county, agency and privately managed roads that occur within the analysis area. These roads receive variable amounts of traffic throughout the year. Impacts to wildlife from roads and associated traffic include avoidance, disruption of movement, and injury and mortality.

Private Land Agriculture - Agricultural development is typically restricted to the privately owned land immediately adjacent to river bottoms. The development of agriculture has resulted in the removal of the native historic riparian habitats. While agricultural fields do not represent native habitat, they are used by a variety of wildlife species throughout the year.

With the no action alternative, conditions on the ground would not change and there would be no beneficial or adverse impacts to wildlife or their habitat.

3.7 Aquatic Resources

Affected Environment

The New Fork River originates on the west slope of the Wind River Mountains and flows 87 miles to the confluence with the Green River. The river is home to several sport fish and native non-game fish species including brown trout, rainbow trout, kokanee salmon, cutthroat trout, mountain whitefish, mountain suckers, mottled sculpin, and speckled dace.

Along its course, the river transitions from a narrow stream system with low lateral migration and high quality habitat with good populations of brown, rainbow, and cutthroat trout to a wide shallow river with high lateral migration and poor habitat quality. Habitat in the project area is characterized as wide and shallow with few pools and high sediment loads (Appendix D). Quality habitat for trout and other non-game fish species is limited in this section of the New Fork River. The wide and shallow channel provides poor habitat diversity for fish species. Woody riparian vegetation is lacking and many outside meanders are contributing to accelerated bank erosion. Excess depositional features have increased the amount of fine substrate, therefore reducing interstitial space, filling in pools, and overall negatively affecting habitat that is important to all life stages of fish.

Environmental Effects

No Action Alternative
No action would result in habitat conditions remaining in the current condition. The lack of pool habitat, the wide and shallow stream (high width-to-depth ratio), and lack of habitat complexity would persist. The channel would continue trending towards a braided type system. Sediment loads to the stream would continue to aggrade the stream channel and degrade habitat.

Proposed Action
Reduced sediment loads in this watershed would benefit the assemblage of aquatic species and riparian obligates supported in the New Fork River drainage, as well as reduce impacts of sedimentation on downstream irrigation infrastructure (e.g., diversions and storage potential in Fontenelle Reservoir). An increase in habitat complexity (e.g., riffle, pool, glide ratio, increase in woody habitat component) would improve habitat for fish, increasing the number of sport and non-sport fish present in this segment of the New Fork River.

This project would:

1) Increase riparian habitat: increase riparian buffer width from 0 feet. to 16 - 20 feet.
2) Improve lateral channel stability by reducing channel widths to improve sediment transport capacity and stabilizing eroding banks. Decrease riffle w/d ratios from 50-60 to 30-40
3) Maintain floodplain connectivity in the New Fork Gas Well
4) Increase overall habitat value for all life stages of the trout population

More detail on the analysis is in Appendix D (New Fork River – Gas Wells Habitat and recreation enhancement project basis of design report).The Proposed Actions (e.g., j-hook structures, willow transplants, brush clumps, toe wood) would stabilize and re-vegetate the eroding banks; decrease the sediment loads and create cover on the New Fork River. With stabilized banks and decreased sediment loads the stream would maintain pool and riffle habitat. Stabilization of the outside meanders would allow the river to build point bars and maintain a good width to depth ratio. The habitat work would increase the natural flow of the stream, improve habitat conditions for fish, and decrease sediment loads to downstream infrastructure.

Cumulative Effects

The CIAA was based on documented changes in fish population density and channel morphology. Fish population density and channel morphology changes occur most drastically below the East Fork River confluence. The CIAA continues downstream to the confluence with the Green River. Past work completed on private lands adjacent to the project area are deemed a positive improvement to the New Fork River and adjacent side channels. Two potential future river projects downstream of the project area on the New Fork River are in the planning stages. The cumulative effects for the Proposed Action would result in beneficial impacts to aquatic resources. The no action alternative would result in the persistence of adverse effects to aquatic resources.

4. Tribes, Individuals, Organizations, or Agencies Consulted

The BLM conducted consultation with federally recognized tribes during the development of the 2008 PFO RMP. The consulted tribes did not identify any concerns regarding habitat treatment projects or implementing projects in this local. No additional Tribal consultation was conducted as the cultural resource review did not identify any cultural resources previously identified as important to Native Americans at the proposed project location.

Wyoming Game and Fish Department
Trout Unlimited
Adjacent Landowners

5. List of Preparers

All preparers are BLM employees unless otherwise stated.

Name	Title	Responsibility
Jim Glennon	Botanist	Special status plant species
Theresa Gulbrandson	Wildlife Biologist	Wildlife, Special status animal species, Migratory Birds
Rob Schweitzer	Archeologist	Cultural/Native American/Paleontology
Alex Gardiner	Fisheries Biologist	Fisheries/Aquatics
Hilda Sexauer (WGFD)	Fisheries Biologist	Fisheries/Aquatics
Justin Feeman	Rangeland Management Specialist	Livestock Grazing, Invasive and noxious weeds, Wetlands and Riparian Areas, and Vegetation
Janet Bellis	Physical Scientist /Hydrologist	Floodplain, Air Quality and Climate
Martin Hudson	Outdoor Recreation Planner	Recreation/Travel Management/Visual Resources
Bill Wadsworth	Environmental Protection Specialist	Hazardous Materials
Brian Roberts	Natural Resource Specialist	Soils
Tracy Hoover	Realty Specialist	Lands
Lauren McKeever/Liz Dailey	P&ES	Review and editing

6.0 Literature Cited

BLM (Bureau of Land Management) 2008. Proposed Resource Management Plan and Final Environmental Impact Statement for the Pinedale Field Office Planning Area. November 2008. U.S. Department of the Interior, Bureau of Land Management.

BLM 2008. Special Status Species Management. BLM Manual 6840.

BLM 2015. Record of Decision and Approved Resource Management Plan Amendments for the Rocky Mountain Region, Including the Greater Sage-Grouse Sub-Regions. September 2015.

BLM 2015. Resource Management Plan (RMP) for the Pinedale Field Office has been amended by the Approved Resource Management Plan Amendments (ARMPAs) for the Rocky Mountain Region, Including the Greater Sage-Grouse Sub-Regions of Lewistown, North Dakota, Northwest Colorado, and Wyoming/Record of Decision (ARMPA) approved September 21, 2015.

BLM 2016. BLM Wyoming Sensitive Species Policy and List. https://www.blm.gov/programs/fish-and-wildlife/threatened-and-endangered/state-te-data/wyoming

Orabona, A., Rudd, C., Grenier, M., Walker, Z., Patla, S., & Oakleaf, B. 2012. Atlas of Birds, Mammals, Reptiles, and Amphibians of Wyoming. Lander, WY: Wyoming Game and Fish Department.

USFWS 2018. Updated list of threatened and endangers species that may occur in your proposed project location, and/or may be affected by your proposed project. Letter dated January 29, 2018.

WGFD 2015. Strategic Habitat Plan. Wyoming Game and Fish Department, Cheyenne, Wyoming.